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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/667,694

09/22/2003

Gilroy J. Vandentop

P16922

9242

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7590

04/17/2006

BUCKLEY, MASCHOFF, TALWALKAR LLC
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NEW CANAAN, CT 06840

EXAMINER

DINH, TUAN T

ART UNIT

PAPER NUMBER

2841

DATE MAILED: 04/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/667,694

Applicant(s)

VANDENTOP ET AL.

Examiner

Tuan T. Dinh

Art Unit

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 9-18, 21 and 22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 19 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date 04/10/06.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Applicant's election with traverse of Group I (claims 1-8, and 19-20) in the reply filed on 01/27/06 is acknowledged. The traversal is on the ground(s) that Group I and II are not distinct. This is not found persuasive because as explained in the Office action mail on 02/27/05, the combination has separate utility, for example a computer system, and the subcombination has separate utility such as a device package, and could be used in vary of industrial electrical field.

The requirement is still deemed proper and is therefore made FINAL. Claims 9-18, and 21-22 are withdrawn from further consideration as being drawn to non-elected subject mater.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "third electrical contact of the substrate and a fourth electrical contact of the die, claim 8" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure

is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 4, 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 4, it is unclear because as claimed in claim 1, the applicant did recite the apparatus comprising "a first electrical contact of an IC substrate, lines 2-3" so does applicant mean of further another IC substrate having a another first electrical contact? Or are they the same or different?

Regarding claim 7, it is unclear because as claimed in claim 1, the applicant did recite the apparatus comprising "a second electrical contact of an IC die, line 5" so does

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applicant mean of further another IC die having a another second electrical contact? Or are they the same or different?

Please, clarify.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-8, and 19-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Beilin (U.S. Patent 5,454,161).

As to claims 1, 4-7, Beilin discloses a multi-chip module (MCM 10) as shown in figures 1-2 comprising:

a plurality of pliant conductive elements (24, column 6, lines 5-6), each having first and second ends (contact pads 28, column 6, line 19), the first end (28) electrically coupled to a first electrical contact (bond pad of a substrate 12/32) of an integrated circuit substrate (12 or 32) and the second end (28) electrically coupled to a second electrical contact (bond pad of an IC 26) of an integrated circuit die (26), the substrate comprises an IC package or a motherboard (the substrate 32 containing a die 26).

As to claims 2-3, Beilin further comprising: a pliant material (22) made by a dielectric material (column 5, line 58 through column 6, line 5) in which the plurality of pliant conductive elements (24) are disposed, see figures 1-2.

As to claim 8, Beilin discloses a first end of a second one of the plurality of pliant conductive elements (24) is to be electrically coupled to a third electrical contact (solder pad) of the integrated circuit substrate (32) and a second end of the second one of the plurality of pliant conductive elements (24) is to be electrically coupled to a fourth electrical contact of the integrated circuit die (solder pad), see figure 2.

As to claim 19, Beilin discloses a MCM (10) as shown in figures 1-2 comprising:
an integrated circuit die (26) comprising a first plurality of electrical contacts (die pads);

an integrated circuit substrate (32) comprising a second plurality of electrical contacts (solder pads); and an interconnect patch (22) comprising a plurality of pliant conductive elements (24), each of the conductive elements having first and second ends (28), the first end (28) coupled to one of the first plurality of electrical contacts (die pads) and the second end (28) coupled to one of the second plurality of electrical contacts (solder pads).

As to claim 20, Beilin discloses a first end of a second one of the plurality of pliant conductive elements (24) is coupled to a second one of the first plurality of electrical contacts and a second end of the second one of the plurality of pliant conductive elements (24) is coupled to the second one of the second plurality of electrical contacts.

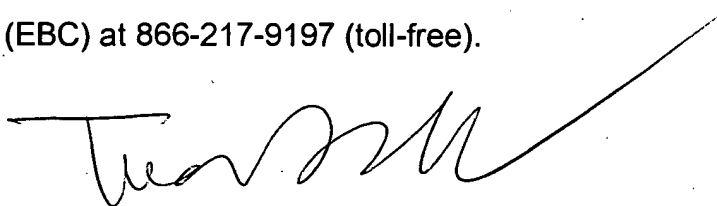
Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Misawa et al. and Klien disclose related art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T. Dinh whose telephone number is 571-272-1929. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kammie Cuneo can be reached on 571-272-1957. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tuan Dinh
April 10, 2006.